Serial Number: 10/692,881 Filing Date: October 24, 2003

Title: VACUUM DEBRIS REMOVAL SYSTEM FOR AN INTEGRATED CIRCUIT MANUFACTURING DEVICE

Assignee: Intel Corporation

REMARKS

Claims 18-21 and 24-27 are amended, no claims are canceled, and claim 32 is added; as a result, claims 18-27 and 32 are now pending in this application.

New claim 32 has been added. Support for claim 32 can be found throughout the specification, for example on page 5 at lines 30-31. Therefore, no new matter has been introduced by the addition of new claim 32.

§102 Rejection of the Claims

Claims 18-20 and 24-26 (Admitted State of the Prior Art)

Claims 18-20 and 24-26 were rejected under 35 U.S.C. § 102(a) as being anticipated by The Admitted State of the Prior Art as set forth on pages 2-3, figures 1-2 of the specification.

Applicant respectfully submits that claims 18-20 and 24-26 are not anticipated by Admitted State of the Prior Art, if any. Claim 18 as amended recites, "no more than one opening formed in the vacuum tube at a selected location to cause air flow in the exposure slit away from a lens of the projection optics." Further, claim 24 as amended recites, "forming no more than one opening in the at least one vacuum tube at a selected location to cause air flow away from a lens element of an integrated circuit manufacturing device." The amendments to claims 18 and 24 incorporate the amendment suggested by the Examiner on page 2 of the Office Action. The Office Action on page 2 refers to Fig. 1, #105 as disclosing "a single opening formed in the vacuum tube." Since there is no element number 105 in Figure 1, Applicant assumes the Office Action is referring to element 115, described in the specification of the present invention as a plurality of holes. (See specification on page 3, line 3) Therefore, claims 18 and 24, as amended, are patentable over Figure 1 of the present invention.

In addition, claims 19-20 are dependent on claim 18, and claims 25-26 are dependent on claim 24. For reasons analogous to those stated above and additional elements in the claims, Applicant respectfully submits that the Office action fails to state a *prima facie* case of anticipation with respect to claims 19-20 and 25-26. For at least the reasons states above, claims 18-20 and 24-26 are patentable over The Admitted State of the Prior Art. Therefore, Applicant

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respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 18-20 and 24-26.

Claims 24-26 (Johnson)

Claims 24-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by Johnson.

Applicant respectfully submits that claims 24-26 are not anticipated by Johnson for several reasons. For example, claim 24 as amended recites, "forming no more than one opening in the at least one vacuum tube at a selected location to cause air flow away from a lens element of an integrated circuit manufacturing device." In contrast, Johnson at column 4, lines 21-27 discloses a lens 20 that is mounted within a chamber 24, the chamber having inert gas introduced into the chamber to reduce the possibility of soot accumulating on the lens 20. In addition, Johnson discloses at column 4, lines 30-33, "A vacuum is applied through the alignment fixture 10 to pull smoke and debris from the area of the component being machined." In Johnson, the alignment fixture is not part of and is completely separate from the chamber where the lens is located. Therefore, Johnson fails to teach "forming no more than one opening in the at least one vacuum tube at a selected location to cause air flow away from a lens element" as recited in claim 24.

In addition, claim 24 as amended includes a lens element of an integrated circuit manufacturing device. On page 4, the Office Action states that the prior art has to be capable of performing a function similar to that of the claimed invention. However, the standard for anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). Johnson at column 1, lines 22-24 states, "One specific example of an application is a connector housing for mounting a plurality of connector elements used in integrated circuit testing. The electrical connector elements are, typically, generally planar in configuration and are mounted in substantially parallel slots for rotation about an axis generally perpendicular to planes defined by the elements." Further, Johnson at column 1, lines 35-41 recites, "The spacing of the connector elements is, of course, dictated by the spacing of the contacts on the integrated circuit to be tested. Very frequently, the spacing is quite close. It is necessary, therefore, to provide slots in the housing mounting the

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electrical connectors which are spaced at the appropriate distances in view of the contact spacing on the IC." Therefore, Johnson discloses manufacture of *connector housings*. Thus, Johnson fails to disclose a lens element of an *integrated circuit* manufacturing device as recited in claim 24. Thus, Johnson fails to teach each of the elements of claim 24.

Further, claims 25-26 depend from claim 24, and therefore include all of the elements of claim 24. For at least the reasons stated above, Johnson fails to teach each of the elements in claims 25-26.

Thus, Johnson fails to state a *prima facie* case of anticipation with respect to claims 24-26. Therefore, Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 24-26.

Claims 24-25 (Kawasaki)

Claims 24-25 were rejected under 35 U.S.C. § 102(a,e) as being anticipated by Kawasaki.

Applicant respectfully submits that claims 24-25 are not anticipated by Kawasaki. As noted above, claim 24 as amended recites, "forming no more than one opening in the at least one vacuum tube at a selected location to cause air flow away from a lens element." In contrast, Kawasaki at column 3, lines 41-46 concerns inert gases discharged so that the gases blow against the back of a semiconductor wafer. The word "lens" does not appear in Kawasaki. Therefore, Kawasaki fails to teach each of the elements of claim 24, specifically, causing air flow away from a lens element.

Claim 25 depends from claim 24, and therefore includes all the elements of claim 24. For at least the reasons stated above, the Office Action fails to state a *prima facie* case of anticipation with respect to claims 24-25. Therefore, Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 24-25.

AMENDMENT UNDER 37 C.F.R. 1.116 - EXPEDITED PROCEDURE

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Allowable Subject Matter

Claims 21-23 and 27 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21 and 27 have been rewritten in independent form to include all the limitations of the base claims and any intervening claims. Claims 22-23 depend from rewritten claim 21.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6971 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SHARONE GINDEL

By his Representatives,

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Date 7 Jun 2005

By _______Mechan!

Reg. No. 24,916

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7th day of June, 2005.

Name

Signature